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ABSTRACT

While this interim report of the Insitute for the Development of Educational Activities (/I/D/E/A/) focuses primarily on the evaluation of its Individually Guided Education (IGE) program, it also includes discussions of (a) the /I/D/E/A/ Change Program in general, (b) implementation of IGE in other than traditional contexts, (c) the importance of training materials and clinical workshops in the success of IGE programs, and (d) monitoring efforts of /I/D/E/A/ with regard to individual school implementation of the IGE program. The portion of the report which deals specifically with evaluation of the program includes sections on (a) a national evaluation study of attitudes toward IGE, (b) teacher evaluation of IGE, (c) effects of IGE on children, (d) cost studies, (e) a case study conducted by the Center for Educational Improvement, and (f) /I/D/E/A/'s study of pupil outcomes. Of the administrators, teachers, and parents who were surveyed, 89 percent rated the IGE program either good or excellent. Of children who were surveyed, 75 percent said they learned more than they did the previous year in which IGE was not used, and 20 percent said they learned the same amount. Children's answers implied that school had been improved by the implementation of IGE. The following negative aspects of IGE are noted: (a) the amount of time required for implementation and (b) the additional staff required for implementation of IGE. The first factor was mentioned by 27 percent of administrators and the second by 12 percent. (HMD)

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What we have learned about the IDEA Change Program for Individually Guided Education

...an interim report

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April 1974

Institute for Development of
Educational Activities, Inc. (I|D|E|A)

A CHARLES F. KETTERING FOUNDATION PROGRAM

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INTRODUCTION

Continuous . . . educational . . . improvement.

Educators have always searched for it. It's what we at the Kettering Foundation and |I|D|E|A| have sought and promoted since the mid-1960s when we launched a series of research and development efforts aimed at finding ways to personalize learning for students and to ensure continuous advancement of schools.

The goals weren't unique, but our approach to reaching for them was. We committed ourselves to a comprehensive program to help educators create environments within schools that would make "Individually Guided Education" a reality. We wanted to find an approach that would make constant improvement a way of life in schools . . . rather than a periodic flirtation.

The |I|D|E|A| Change Program for Individually Guided Education includes concepts that have come from the work of many people and institutions. The guidelines and processes of implementation stem from the Study of Educational Change and School Improvement begun by |I|D|E|A| in 1966 and from subsequent staff work done in cooperation with other institutions and schools.

Included in this report is a detailed idea of how we are evaluating the program and what we have found so far. We can note here that the results thus far have been positive, that the Change Program for IGE continues to be one of the most promising school improvement efforts ever undertaken.

In 1970, there were 125 schools participating in the project. Today, more than 1,000 elementary schools in 33 states plus American-sponsored schools in some three dozen other countries are in some phase of implementing the IGE program. IGE also has been introduced into middle and junior high schools (serving the 10- to 15-year-old students). During the 1973-74 school year, the program began to reach the high school level (serving the 14- to 19-year-olds). Evaluation information in this report relates to the program at the elementary school level.

We have definite evidence that change is taking place in schools. We can verify that attitudes toward IGE are overwhelmingly favorable. We have found that IGE's impact on student achievement tests scores is mixed, but we expected that would be the case considering the short time IGE has been in the schools and the many other variables that influence achievement scores.

We have learned that IGE's influence on cost is also mixed; we see that the dollar cost of the program is largely determined by the individual school. We find that the increased workload and time required to implement IGE are sources of concern among many teachers and administrators. Finally, we note that IGE schools need to make special efforts to keep their communities informed of what's happening in the schools.

In this report we want to share with you the overall picture of where IGE has been and where it is now. Much of the credit for the success of IGE belongs to the many educators, students, parents, and other citizens who have made this program possible.

On this basis, we invite you to read this report and respond, if you wish, with comments, suggestions, or questions regarding any aspect of the program of particular interest to you.

Samuel G. Sava
Executive Director, |I|D|E|A|

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CHAPTER I. THE |I|D|E|A| CHANGE PROGRAM: AN OVERVIEW

The Study of Educational Change and School Improvement

The Charles F. Kettering Foundation established the Institute for Development of Educational Activities, Inc. (|I|D|E|A|) as its educational affiliate in 1965 and assigned it the task of developing new ways to accelerate improvement in education.

At the time, it was clear that many attempts to improve school practices through innovation were failing. Sometimes the failures were blamed on inadequate teacher training, sometimes on communities that refused to vote adequate funds, and sometimes on school personnel who resisted the new simply because it was new. Whatever the cause, though, the future of innovative educational programs looked bleak.

While conceding that each of these explanations might hold some part of the truth, we did not attempt to deal with any of them directly. Instead, we chose to begin development of a new strategy for improving schools.

In 1966, |I|D|E|A| began working with a group of 18 elementary schools—labeled the League of Cooperating Schools—in southern California. The schools were carefully selected to represent a cross-section of American public elementary education.

The project was known as the Study of Educational Change and School Improvement and ran for five years. Here are some of the guiding concepts underlying the project.

> *The individual school is a strategic unit of educational change.*

Each school, with its students, principal, teachers, parents, and residents of the surrounding community, is a strategic and significant vehicle for bringing about educational improvement.

All the elements for carrying out instructional and learning functions exist at this level: pupils, materials, teachers, and instructional authority. This focus on the total school rather than the classroom may seem odd since the instructional payoff from change shows up most importantly at the classroom level.

But the Study showed that the individual teacher who wants to try new patterns of instruction rarely succeeds unless the school supports her efforts. Try as she may to adopt some interesting new ideas, her attempts at change are easily frustrated when unsympathetic colleagues regard her as a threat to their own professional standing, or when an unsympathetic principal who regards her as "radical" or "unreliable" translates this personal reaction into a denial of promotion or tenure.

> *The culture of the school is central both to understanding and to effecting educational improvement.*

Over a period of time, every school develops its own culture which is reflected in a set of beliefs and practices. These "ways of living" deeply affect the school and, in turn, are shaped by all who teach or learn in it.

The belief system held by a critical mass of individuals who compose the staff greatly influences the performance of the school. Their collective action helps determine what the school does or does not do: will the staff seek and support new responses to its problems, or will it continue the status quo year after year, rarely if ever examining the difficulties which confront it?

Continuous school improvement begins by building an allegiance to norms and expectations that support the staff's search for improved methods. It is unrealistic to expect a school principal or teacher to change his behavior when he believes that his present practice works well. Change efforts must be directed toward obtaining agreement from a critical mass of the school staff that they can do a better job, and toward stimulating them to reach out for help.

> *Given existing social and educational constraints, most individual schools are not strong enough to overcome the inertia against change built into the typical school district.*

Policies and procedures established at a certain point in time, usually for good reasons, evolve through the years into a "system" over which no individual has control.

"Policies and procedures established at a certain point in time, usually for good reasons, evolve through the years into a 'system' over which no individual has control."

If the education system fails to involve itself in promising innovative educational programs, it may prevent many children from realizing the full potential of their lives.

What were once sensible restrictions can become cumbersome, bureaucratic rules which few people have the authority or hardiness to break—even after those rules have outlived their usefulness.

At least in part, schools are organized into districts to promote some degree of uniformity in the allocation of resources, hiring and promotion policies, and the treatment of students. Principals are appointed in anticipation of their maintaining these uniformities, not challenging them. They may innovate "around the edges," but they understand that they are not expected or encouraged to change anything basic. A local school principal or group of teachers who deviate markedly from established expectations risk isolation and censure.

No single school can stand alone against the forces that resist change in a school district. The school must reach out to other change-minded schools that can offer it emotional and professional backing (moral support from other changing schools, professional expertise in solving instructional problems) when these are not provided by the school's own district.

As a new social system, the League of Cooperating Schools created a positive "press" for change and for the new expectations, roles, activities, relationships, and rewards that substantive change entails. The result was that both new demands and new resources for staff development were created.

Each school needs a process by which it can deal effectively with its own problems and effect its own change.

|I|D|E|A| planned that, partly through participation in the League, each school would develop an improvement process: a systematic procedure for discussing and diagnosing its own problems, formulating solutions, taking action on recommended solutions, and then trying to obtain evidence about the effects of such action.

The process, refined after many experiments, was termed DDAE—Dialogue, Decision-making, Action, Evaluation.

Principals and teachers in the League undertook the central task of preparing guidelines and criteria for promoting, monitoring, and evaluating the quality of DDAE in their schools. These criteria covered such elements as processes of group interaction, use of professional literature to obtain ideas and supporting research, planning of faculty meetings, and conducting faculty and small-group meetings. Principals, school faculties, and sub-groups more and more imposed upon themselves the behavioral processes implied by the criteria they had chosen.

As teachers became more involved in DDAE, they began to identify staff development and self-improvement as being important areas required to effect the overall educational change desired.

Contrary to typical patterns of in-service training that frequently remove teachers from the schools and ask them to concentrate on problems or programs chosen by someone else, the League strategy focused staff development on problems that had been selected by the principals and teachers themselves.

Some screening, legitimizing, and communicating of ideas beyond what individual schools might do informally must be built into the new social system.

A consortium of schools is, at best, a loosely defined entity. It needs a central point, a hub. The |I|D|E|A| Research Division in West Los Angeles happened to be centrally located to the League of Cooperating Schools and served this need.

But the League itself became an increasingly powerful resource for staff development with each passing year. Through a newsletter, it contributed significantly to the mutual support and assistance roles envisioned early in the project.

Each school appointed a reporter who submitted brief "League reports," recounting successes and difficulties. A classified ad section ultimately appeared in which schools noted assistance they could offer to other schools or help they needed in solving a problem. Sometimes, communication occurred directly from school to school; at other times it was facilitated by the hub.

Brief training sessions among interested parties became commonplace during the fourth and fifth years of the project.

As the project progressed, |I|D|E|A| provided less and less of these services while the cooperating schools provided more and more. But the hub, whether in spite of or because of its changing character, always constituted a major part of the strategy.

> *Individuals asked to take risks are more willing to do so when some elements of success are already built into the structure.*

It's easy to support the underdog when little of a personal nature is involved. But when careers or familiar patterns of behavior are at stake, most people prefer to be associated with a winner.

For this reason, the League's relationship with the Kettering Foundation, |I|D|E|A|, and UCLA loomed large—at least in the beginning. These institutions became less important and less visible as the League and its constituent schools developed an increased sense of their own power. But the initial alliance with established institutions helped the schools in the early stages when they tended to feel they were going out on a limb.

Did the League schools help each other? |I|D|E|A| and the staffs of League schools discovered they did—largely because, in cooperation with the Institute, they learned something of the dynamics of educational change, of the difficulties they faced in trying to change themselves, and of how they might maximize the favorable conditions and minimize the unfavorable in following the courses they had charted for themselves.

Three patterns of help to schools or groups of teachers emerged during the Study of Educational Change and School Improvement. Quite early in the League's history, teachers from schools that had moved ahead quickly were in demand as group leaders for workshops in neighboring school districts. (Rarely, be it noted, were they in demand in their own districts in the first stages of the project.)

Similarly, League principals were called upon relatively early to assume leadership roles in summer conferences and institutes. Somewhat later, after they had attracted recognition elsewhere, both League principals and teachers served in such capacities in their own school district.

Finally, staff members in League schools visited each other and provided mutual assistance. They acted, in effect, as consultants to each other.

Several sources of data were used throughout the five-year Study to evaluate the effectiveness of the League organization as a strategy for improvement. Classroom observations, teacher questionnaires, and interviews yielded information on changes in school climate, staff process, programs, and methods.

Findings from the Study were published beginning in the fall of 1973 by McGraw-Hill Book Company in a series called */I/D/E/A/ Reports on Schooling*. Several documentary films on the Study also were produced.

How the |I|D|E|A| Change Program for Individually Guided Education Began

|I|D|E|A|'s five-year inquiry and development relating to the process of change was concerned with the school as the dependent variable. We wanted to find ways of getting the school to function in a manner consistent with what is known about sound organizational and operational procedures. Though there was a pervasive interest in individualizing learning opportunities for students in the Study of Change, all efforts of project schools to implement new programs or merely try new ideas became targets of observation and analysis.

Beginning in 1968, staff members from |I|D|E|A|'s office in Dayton, Ohio, began working directly in schools to seek ways of blending our emerging findings from the Study of Change with specific tactics and strategies to individualize learning programs for students in the context of continuous improvement of the staff and school. Rather than a set of neatly packaged course outlines, the focus of |I|D|E|A|'s work was on developing processes that could be applied to any goals that a school and community might adopt.

Under a project called "Enhancing Differences," |I|D|E|A| staff members devoted more than two years to working in 20 elementary, middle, and junior high schools in Ohio, Florida, New York, and Michigan. In addition to incorporating the "peer group intervention strategy" from the Study of Change, the Institute's work in Enhancing Differences was guided by several basic concepts about teaching and learning—concepts that had been documented by many years of research and practice but that had been implemented in a limited number of schools and classrooms. Results of the Enhancing Differences projects were combined with research and development of several cooperating educational institutions into the |I|D|E|A| Change Program for Individually Guided Education (IGE).

Individualized Learning Allows Students to Progress at Their Own Pace

A basic consideration in helping children learn is the recognition that students differ in their learning aptitudes, talents, and interests just as they differ in height, weight, and physical strength.

The challenge to |I|D|E|A|'s Innovative Programs staff was to find ways to help teachers take diverse student abilities and interests into account in the conduct of schooling. One aspect of the response was ways of grouping and regrouping pupils into appropriate learning activities regardless of their age or year in school. This allowed each student to progress

The student in an IGE school has a learning program developed to fit his specific needs, abilities, and talents.

"A basic consideration in helping children learn is a recognition that students differ in their learning aptitudes, talents, and interests just as they differ in height, weight, and physical strength."

through his learning program at his own pace. Another dealt with helping teachers adjust the medium of instruction in the classroom to accommodate various learning styles.

Another point of focus for the work of the Innovative Programs staff sought ways to help teachers vary the instructional setting to meet different purposes for different students. Recognizing that a single instructional setting affords little individual attention, the |I|D|E|A| staff worked with teachers to help them vary the instructional mode (large-group, small-group, tutorial, independent study) as well as the time, space, and place for learning.

The staff also worked to help teachers develop ways of organizing to accommodate student differences in their responses to individual teachers.

Teaming Promotes Continuous Improvement and Individualized Learning

Implementing processes of individualized learning programs for students and continuous improvement of the staff and school called for a restructuring of the school organization. Instead of being organized into the usual self-contained classes in which all students of a single age are grouped together, schools in the developmental projects were organized into what are now called "Learning Communities." Each Learning Community includes a number of students (from two, three, or four age groups), resource teachers, and aides. This special organization provides for highly integrated groups capable of continuous innovation, assessment, and improvement of educational programs.

Seven steps—embracing concepts of Dialogue, Decision-making, Action, and Evaluation—form the basis of the IGE improvement process as it evolved. They work just as well for individual teachers measuring their own performance as for Learning Communities assessing group progress:

- List goals and performance criteria.
- Select specific objectives.
- Evaluate the present level of performance.
- Plan for improvement.
- Implement the plans developed.
- Reassess the plans, the implementation procedures, and the degree of achievement.
- Select new goals and objectives.

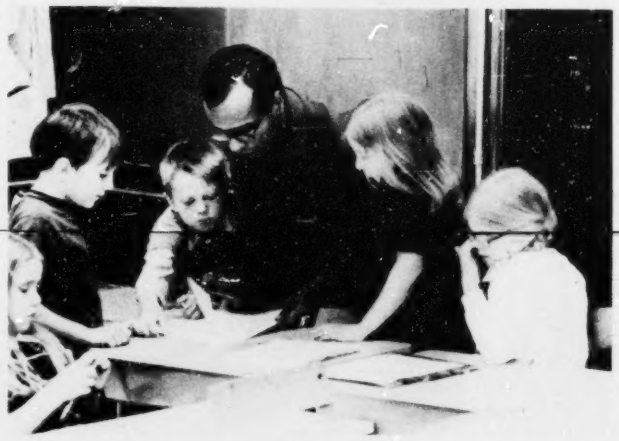
The concept of teaming in IGE means that all teachers in an IGE Learning Community share instructional responsibility for all the children they work with. They meet regularly to make decisions about educational goals and designs for learning. They assign children to learning groups that are appropriate to the purposes at hand.

Teachers in each IGE Learning Community also make group decisions regarding allocation of resources, arrangements of space and time, the choice of instructional materials, and the grouping of children and staff.

The concept of shared responsibility is continued through the Program Improvement Council composed of the principal and the Learning Community leaders. In addition to deliberating on ways of improving education throughout the school generally, they make decisions that affect more than one Learning Community (such as the use of facilities and the timing of activities) so that one Learning Community's operations will not interfere with others.

In addition to recognizing teacher differences, IGE puts them to work through team-planning and role-specialization. By constantly working and planning together, teachers in each Learning Community learn each others' strengths and weaknesses and plan teaching assignments with these individual traits in mind. Further, through constant assessment of student progress, diagnoses of learning problems, and planned variations in all the components of the learning situation, IGE teachers learn to fit their capabilities to their students' needs.

"Under the advisor arrangement, each teacher assumes primary responsibility for guiding the education of a percentage of the Learning Community's students."



The teacher-student relationship is humanized through IGE's advisor concept.

The Advisor Concept: Each Teacher Is a Guide

While most teachers in IGE schools recognized the advantages of a cooperative approach to educating youngsters, many of them expressed concern over the feeling that in the process of "individualizing instruction" they might lose sight of the individual.

Recognizing that effective human relationships are a part of the total learning process for both teachers and students, |I|D|E|A| incorporated an advisor concept into its Change Program. Under the advisor arrangement, each teacher assumes primary responsibility for guiding the education of a percentage of the Learning Community's students.

The advisory function in IGE is a natural extension of the traditional teacher-student relationship. It is directed to the need of most students to identify closely with one person and to develop the security which comes from the feeling that there is at least one special person within the school who can be depended upon for encouragement and guidance.

The advisor in an IGE school also is responsible for ensuring that each of his 20 to 30 advisees learns how to learn. Setting goals for student achievement and getting the student to examine his own goals are important functions of the advisor.

IGE Clinical Training Workshops Help Teachers Use Their Flexibility

After refining the basic instructional concepts necessary for individualizing learning and adopting a revised organizational plan that would give teachers the necessary freedom, |I|D|E|A| set about designing a training program that would enable teachers to use their new flexibility.

The result is the IGE clinical training workshop for teachers and for leadership people participating in the program.

The workshops are "clinical" because they include students, and because participants learn IGE processes with the assistance of persons who have demonstrated their own proficiency at those processes.

Participants are not told a new method of teaching; instead, they learn new methods by using them and by drawing support and knowledge from their peers; they are taught with the same methods that they will be expected to use. By the close of the workshop, participants must be able to demonstrate their ability to use IGE processes in improving their own teaching and in helping the teachers with whom they work. Credit-hours or clock hours of exposure to training is not the criterion used by |I|D|E|A| in determining successful workshop participation.

The School Staff Selects the IGE Model

Teachers in an IGE school are expected to have a high degree of decision-making authority. They will decide who will belong to each Learning Community, they will choose curricular materials, they will play a major role in determining the allocation of the school's resources (within district budget guidelines), and they will choose general and specific learning objectives. This authority brings with it a considerable degree of responsibility—and the IGE clinical training workshops are designed to ensure that teachers exercise their authority and meet their responsibilities well.

But these decision-making powers may also require alterations in the traditional pattern of school governance. For this reason, |I|D|E|A| and its participating institutions require that the following criteria be met before any school commits itself to IGE implementation:

- All staff members will have an opportunity to examine their own goals and the IGE outcomes before a decision is made to participate in the program.
- The school district will approve the school staff's decision to implement the |I|D|E|A| Change Program for IGE.

The first requirement ensures that a staff's participation in IGE will be voluntary—not a grudging obedience to a mandate from the top. The second requirement ensures that the staff will have the degree of support it needs to carry out the IGE program.

IGE Seeks 35 Outcomes

Processes of the |I|D|E|A| Change Program for Individually Guided Education have been summarized in 35 outcomes. These outcomes become the central focus of initial training and continuing in-service development.

An Implementation Kit includes cards for each of the outcomes with tips and suggestions for their achievement and lists of learning resource materials. These outcomes are listed below:

1. All staff members have had an opportunity to examine their own goals and the IGE outcomes before a decision is made to participate in the program.
2. The school district has approved the school staff's decision to implement the |I|D|E|A| Change Program for Individually Guided Education.
3. The entire school is organized into Learning Communities with each Learning Community composed of students, teachers, aides, and a Learning Community leader.

4a. Each Learning Community is comprised of approximately equal numbers of two or more student age groups (ages 5-11).

4b. Each Learning Community consists of approximately equal numbers of all age groups in the school (ages 10-19).

5. Each Learning Community contains a cross-section of staff.
6. Sufficient time is provided for Learning Community staff members to meet.
7. Learning Community members select broad educational goals to be emphasized by the Learning Community.
8. Role specialization and a division of labor among teachers are characteristics of the Learning Community activities of planning, implementing, and assessing.
9. Each student's learning program is based on specified learning objectives.
10. A variety of learning activities using different media and modes are used when building learning programs.
11. Student learning takes place with Learning Community members except when special resources are required.
12. The staff and students use special resources from the community in learning programs.
13. Learning Community members make decisions regarding the arrangements of time, facilities, materials, staff, and students within the Learning Community.
14. Students and teachers are involved in continuous assessment of learning programs using a variety of techniques.
15. The following are considered when students are matched to learning activities:
    - Peer relationships
    - Achievement
    - Interest in subject areas
    - Self-concept
16. Each student has an advisor whom he or she views as a warm, supportive person concerned with enhancing the student's self-concept; the advisor shares accountability with the student for the student's learning program.
17. Each student (individually, with other students, with staff members, and with his or her parents) plans and evaluates his or her own progress toward educational goals.
18. Each student accepts increasing responsibility for selection of his or her learning objectives.
19. Each student accepts increasing responsibility for the selection or development of learning activities for specific learning objectives.
20. Each student can state learning objectives for the learning activities in which she or he is engaged.
21. Each student demonstrates increasing responsibility for pursuing her or his learning program.
22. There is a systematic method of gathering and using all information about a student which affects his or her learning.
23. The school is a member of a League of schools implementing processes and participating in an interchange of personnel to indentify and alleviate problems within the League schools.
24. The school as a member of a League of IGE schools stimulates an interchange of solutions to existing educational problems and serves as a source of ideas for new development.
25. Staff members are responsive to one another's needs, trust one another's motives and abilities, and have developed the techniques of open communciation, thereby leading to an effective working relationship.
26. The Program Improvement Council analyzes and improves its operations as a functioning group.
27. The Program Improvement Council assures continuity of educational goals and learning objectives throughout the school and assures that they are consistent with the broad goals of the school system.
28. The Program Improvement Council formulates school-wide policies and operational procedures and resolves problems referred to it involving two or more Learning Communities.
29. Students are involved in decision making regarding school-wide activities and policies.
30. The Program Improvement Council coordinates school-wide in-service programs for the total staff.

31. Open communication exists between parents, students, staff, and the community.
32. The Learning Community analyzes and improves its operations as a functioning group.
33. Teacher performance in the learning environment is constructively critiqued by members of the Learning Community using both formal and informal methods.
34. Decisions regarding the planning of learning programs for the Learning Community in general and for individual students are contructively critiqued by members of the Learning Community.
35. A personalized in-service program is developed and implemented for each Learning Community staff member.

"Each IGE school is a member of a League consisting of 5 to 15 schools."

Students working together on special projects is common to all IGE programs from elementary through high school.

Each League of Schools Has a Trained IGE Facilitator

Consistent with the strategies developed in the Study of Change, the IGE program involves clusters of schools committed to the IGE outcomes. Each IGE school is a member of a League consisting of 5 to 15 schools. Some Leagues include a portion of schools within a single district, while others cut across school-district boundaries.

|I|D|E|A|'s implementation procedures are to work through "Intermediate Agencies" such as local and state education agencies, colleges and universities, and other service institutions. One of the initial actions of the Intermediate Agency is to appoint a League Facilitator who is assigned and trained to perform the following tasks:

- Use his knowledge about IGE processes to help League members achieve the program goals.
- Assist school personnel to recognize the degree to which IGE processes are being practiced by the principal, Learning Communities, and/or Learning Communities teachers.
- Train selected personnel to serve in leadership capacities for IGE within a given geographical area.
- Identify and recruit potential schools to participate in an IGE League.
- Develop a system for collecting and sharing data pertaining to resources and curricular materials to assist with implementation of IGE.
- Establish and coordinate the functions of a League within its given geographical area.

The History of IGE's Implementation Shows Constant Growth

Following initial design efforts in the League of Cooperating Schools and in schools of the Enhancing Differences project, the staff began developing implementation strategies for broad diffusion of the |I|D|E|A| Change Program for Individually Guided Education. During 1970, there were 2 Intermediate Agencies and 125 schools participating in the project. A total of 32 Intermediate Agencies and 353 schools were involved in the project during 1971. There were 49 Agencies and 817 schools in 1972. As of September 1973, there were 84 Intermediate Agencies and more than 1,000 elementary schools participating.

There are 8 Agencies pilot testing IGE with 30 middle and junior high schools. The program will be introduced to selected high school IGE Leagues during the 1973-74 school year.

In addition to development efforts in this country, American-sponsored schools in 36 countries are in some stage of implementing the program. Also, arrangements are proceeding to follow up on the interest expressed by educational officials of other countries in the Change Program for their schools.

IGE Concepts Have Come From Many Sources

As indicated in the Introduction to this report, concepts in the |I|D|E|A| Change Program for Individually Guided Education have come from the work of many institutions. The Institute has drawn from the efforts of other programs, such as the Ford Foundation sponsored Harvard Teaching Teams' Projects from 1959-1964. Another source has been the Wisconsin Research and Development Center for Cognitive Learning.

An early outcome of the Wisconsin Research and Development Center's "Project Models" (maximizing opportunities for development and experimentation and learning in the schools) was the creation of 13 nongraded instructional and research units as replacements for age-graded classrooms and schools of Madison, Jamesville, Milwaukee, and Racine, Wisconsin, beginning in 1966. This effort marked the beginning of the Multi-Unit Elementary School which was subsequently tested in a variety of situations.

Through an agreement in 1969, results of the Center's experience with the Multi-Unit organizations were combined with |I|D|E|A|'s research and development efforts to prepare in-service materials relating to IGE. |I|D|E|A| and the Center define their respective programs differently, however, and use different implementation strategies and materials. Both institutions use the term "Individually Guided Education."

Some of the Intermediate Agencies and schools participating in the |I|D|E|A| Change Program also participate in the Wisconsin Research and Development Center's Program.

CHAPTER II.
IGE CONCEPTS EXIST IN OTHER CONTEXTS

Nongraded Schools

As noted in the Introduction, concepts in the |I|D|E|A| Change Program for Individually Guided Education have been implemented in schools in various forms for many years. More than three decades ago, some schools began to move away from the graded structure toward a form of nongraded schooling. This approach provides continuous progress and frequently involves multi-age grouping. Nongradedness is a key element of Individually Guided Education.

Contrary to a frequently encountered impression, there has been considerable research into the effectiveness of nongradedness. Available evidence clearly indicates that a nongraded school has very positive impacts. Nongrading not only provides an opportunity to fulfill responsibilities consistent with professional knowledge about students and break the lockstep movement through a rigid curriculum, it also makes a difference in what students achieve.

Bob F. Steere[1] recently summarized a number of research studies which statistically evaluated various nongraded programs. He cites the following:

•A 1952 comparison of 99 nongraded students with a control group of 123 students that showed reading achievement and personality adjustments were slightly better for nongraded students even though nongraded students were slightly lower on mental maturity.

•A comparison of 11 fifth-grade rooms with three nongraded intermediate groups of similar mental and chronological ages in Appleton, Wisconsin, in 1955-56, with results favoring the nongraded pupils in both reading and spelling.

•A comparison of achievement scores in Mansfield, Ohio, public schools showing average grade placement scores .29 years higher following nongrading.

•A comparison in Belview, Washington, of two nongraded classes at the end of a three-year period indicating that nongraded pupils showed greater achievement in reading.

•Significantly greater reading achievement for nongraded students in a comparison with reading achievement scores of 5,169 pupils attending graded schools for three years with the scores of 8,281 pupils attending nongraded schools in the St. Louis Archdiocese parochial schools.

•A significantly higher reading score for nongraded students in language arts and reading tests where 68 nongraded students were compared with 337 students in the same school prior to initiating a nongraded plan in Flint, Michigan.

Steere goes on to cite more than half a dozen analyses of nongraded education. Though there are studies where graded students scored significantly higher than nongraded students in pupil achievement, the bulk of the studies in Steere's report favor a nongraded approach.

More recently, Barbara Nelson Pavan[2] has reported on 16 research studies comparing schools having nongraded or open classrooms with graded classrooms. Pavan states, "There has accumulated solid evidence of the value of nongradedness." She cites the following tendencies:

•Comparisons using standardized achievement tests continue to favor nongradedness.

•Comparisons using a mental health component show results that favor nongrading.

•Fewer children spend longer than usual time in nongraded schools.

•It is particularly beneficial for blacks, boys, and underachievers to be in a nongraded environment

The Multi-Unit Elementary School

Because of parallels between the Wisconsin Research and Development Center's Multi-Unit Elementary School and the |I|D|E|A| Change Program for Individually Guided Education, results

[1] "Nongradedness: Relevant Research for Decision Making," *Educational Leadership* (May 1972), pp. 709-711.

[2] "Nongradedness? One View," *Educational Leadership* (February 1973), pp. 401-403.

"Available evidence clearly indicates that a nongraded school has very positive impacts."

The significant requirements in an innovative educational program are a willingness to change and a dedication to involvement.

of the Center's evaluation data are relevant to this report. The Center's data collection efforts have given attention to student performance, student attitudes, and organizational characteristics.

In general, the Center reports show that students achieve higher and their attitudes toward school improve in the Multi-Unit school. In addition, Center studies indicate that the Multi-Unit Elementary School is a more professionally satisfying environment for teachers and principals.[3]

Early studies by the Center which have examined academic achievement in the early years of the Multi-Unit schools have varied in their results. Some study results have been inconclusive. Some studies show better achievement in Multi-Unit schools than in control schools, while in a few studies achievement in control schools was higher.

The Center's researchers report that when a Multi-Unit Elementary School staff uses the model of an instructional program in a curriculum area, a higher percentage of children master learning objectives. Since the introduction of the Wisconsin Design for Reading Skill Development (WDRSD), more substantial differences have favored students who received this individualized instruction. There have also been some favorable results in the areas of handwriting, mathematics, spelling, and language arts.

In their March 1971 summary[4] the Wisconsin researchers indicate the desirable effects of the Multi-Unit organization and a concerted attack on curriculum improvement along the IGE model. They further note that this is not to be interpreted as an indication that organization alone will produce higher student achievement or that higher achievement will accrue without a coordinated, well-planned curriculum improvement effort.

The Center has reported several studies where teachers observed increased student enthusiasm and positive involvement with regard to school and/or particular academic programs. Results of a study by R. G. Nelson[5] show that Multi-Unit Elementary School pupils do like school, have a higher opinion of themselves, and show greater self-respect than pupils in a traditional school. A summary of the Nelson study results follows:

- Pupils in Multi-Unit Elementary Schools displayed a more positive attitude toward their fellow students, toward instruction, toward their school plant, and toward their community than did thier counterparts in traditional schools.
- Pupils in Multi-Unit schools exhibited evidence of a more positive learning climate than did pupils in traditionally organized schools.
- Pupils in Multi-Unit schools generally appeared to have a more positive self-concept as learners than did pupils in traditionally organized schools.
- Pupils in Multi-Unit schools revealed a more positive attitude toward school in general (school morale) than did pupils in traditionally organized schools with respect to their attitude toward teachers, administrators, and staff.
- There was no difference between Multi-Unit pupils and pupils in traditionally organized schools with respect to their attitude toward teachers, administrators, and staff.
- There was no difference between Multi-Unit school pupils and pupils in traditionally organized schools with respect to records of attendance and tardiness.

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3 H. J. Klausmeier, M. R. Quilling, J. S. Sorenson, *The Development and Evaluation of the Multi-Unit Elementary School, 1966-70*, Wisconsin Research and Development Center for Cognitive Learning (Madison), Technical Report No. 158, 1971.

4 *Ibid.*, p. 15.

5 *An Analysis of the Relationship of the Multi-Unit School Organizational Structure and Individually Guided Education to the Learning Climate of Pupils*, Wisconsin Research and Development Center for Cognitive Learning (Madison), Technical Report No. 213, 1972.

Professional satisfaction and decision making in the Multi-Unit school were the objects of an inquiry by Roland J. Pellegrin[6] of the University of Oregon's Center for the Advanced Study of Educational Administration. Excerpts from his report follow:

"The organizational changes introduced by Multi-Unit Schools are among the most extensive of which we are aware. Among these are the replacement of conventional grades by units, team teaching, the use of instructional and clerical aides, and the introduction of the new position of unit leader. It is also true that these changes in organization are accompanied by a host of other innovations—e.g., individually guided education, the provision of enriched and flexible curriculum materials, and an emphasis on planning, identification of objectives, and evaluation.

"In this paper we have presented findings that reveal a high rate of professional satisfaction in the Multi-Unit School. We have also shown that there have been fundamental changes in the ways decisions are made. Decision making has become centralized in the sense that the authority of the individual teacher or principal to make certain decisions has been decreased. On the other hand, it has been decentralized in that more persons are involved in a wider range of decisions through group participation in decision making.

"We have evidence that group participation in decision making is highly regarded by the faculty members of Multi-Unit Schools. In interviews, both high job satisfaction and increased effectiveness were attributed to teacher involvement in the decisions affecting their work. Various pieces of evidence reveal the belief of teachers that their power to affect decisions is substantial.

"Still other data reveal an enthusiasm for group decision making among Multi-Unit faculty members. In a series of questions on teacher preferences concerning a variety of policy-making prerogatives, respondents in Multi-Unit Schools were much in favor of the group participation of teachers in the establishment of a variety of policies at the school and district levels. We conclude, therefore, that the faculty of the Multi-Unit School not only feels a heightened sense of power, but it is enthusiastic about the potentialities of group participation in decision-making processes.

"These findings are fully in accord with those of a substantial body of research and theory in social psychology. For many years, certain students of organizational processes have extolled the improvements in morale and work effectiveness that accompany high rates of peer group interaction and the heavy involvement of people in decisions that bear directly upon the work they perform. These writers have contended that when groups actually are given the authority to make and implement decisions that are significant for them, they make these decisions effectively, responsibly, and enthusiastically. Unfortunately, researchers have found few instances in any kind of organization in which there has been a real and comprehensive transfer of authority to the work group. The Multi-Unit School is clearly an example of an organization in which group decision making has become an accomplished fact. This development augurs well for the future of the Multi-Unit concept. We can expect that with additional experience in the operation of Multi-Unit Schools, together with further studies of the organization and functioning of these institutions, it will be possible to increase the effectiveness with which they carry out their responsibilities."

In the follow-up study[7] of 98 schools included in his 1971-72 assessment of installation of the Multi-Unit School/IGE model for elementary schools, Roderick A. Ironside of Educational Testing Service concluded that "All evidences point toward the conclusion that the Multi-Unit School/IGE organizational and instructional changes have *taken hold* in the majority of schools responding to the follow-up." He said attrition apparently has been slight if it exists at all, and many schools have come closer to institutionalizing the two areas of innovation.

Other conclusions reported by Ironside follow:

1. "Success" in one arena does not imply success in the other. The expressed needs for assistance with appropriate instructional programming are so numerous as to suggest that this is a difficult thing for schools to adopt and put into practice, even in the second year. The organizational and facilitating aspects of the Multi-Unit School, on the other hand, appear to have been more generally implemented in all groups.
2. Fulfillment of even the basic criteria is difficult to ascertain in absolute terms; therefore, the schools treated here have made changes of one sort or another *which may be taken to represent adoption and continuation of the Multi-Unit School/IGE innovations.* In other words, it is no more easy this year than last to determine "which schools have really installed the patterns."
3. Postponing most or all implementation tasks to a later time may not result in making gains in fulfilling the implementation criteria. A number

[6] *Professional Satisfaction and Decision Making in the Multi-Unit School,* A Research Study Report to the 1969 Wisconsin Education Association Annual Meeting.

[7] *A Supplement to the 1971-72 Nationwide Installation of Multi-Unit/IGE Model for Elementary Schools and a Process Evaluation—The Fall 1972 Follow-Up,* Princeton, N.J.

of schools, associated with Multi-Unit Schools/IGE at various levels in 1971-72, delayed "initiation" until the fall of 1972 and in effect extended their preparation time; however, as a group, these schools still lack certain features or practices, just as other schools did in 1971-72, and, in addition, indicate a number of problems and needs still to be met. It may be that there is a critical point in awareness and commitment (though extremely difficult to define) when schools should simply proceed and work things out little by little, rather than postponing until a more propitious time. Unless that interim period is an active one (with experimenting, organizing, grouping, and so on), it may be of limited value.

4. A related conclusion—perhaps more of a speculation—is that unless schools *do* get a fairly good start, determine strong teacher commitment, and bring changes in a number of related MUSE/IGE factors, then they may find it difficult to "make up" for a weak start later. There are some schools—based upon questionnaire data and/or visits—which appear at mid-year to be at about the same level of operation and expectation as during the 1971-72 school year. While such a circumstance may not be unexpected in too many schools, it is nevertheless unfortunate; and it suggests the need for a well-defined set of goals at the outset of implementation, along with measureable amounts of commitment, materials, support, and awareness.
5. There continues to exist a very real need for technical assistance to the schools (and reinforcement of steps already taken), regardless of their installation dates.

Additional information relating to evaluation efforts of the Wisconsin Research and Development Center's work may be obtained from the Center's office in Madison, Wisconsin.

CHAPTER III. TRAINING MATERIALS AND CLINICAL WORKSHOPS ARE IMPORTANT IN IGE'S SUCCESS

Training Materials

Training materials for the |I|D|E|A| Change Program for Individually Guided Education include printed documents, filmstrips with audio cassettes, and motion pictures. The materials have undergone continuous revision since the program was initiated. Final revision of the elementary school package will be completed during the 1973-74 school year.

Throughout the developmental period, |I|D|E|A| staff and consultants have reviewed materials extensively for their technical and conceptual adequacy. In addition, informal and formal reactions have been obtained from teachers in IGE schools who use the materials to learn more about IGE processes. We want to identify the extent to which teachers are attracted to and like the materials themselves as well as the extent to which they are able to gain the content knowledge from the materials.

Participants' attitudes toward the materials have been essentially good to excellent. The number of workshop participants who make a special effort to compliment |I|D|E|A| staff members on the quality of the filmstrips and films and printed documents lends support to our positive feelings about these materials.

The most extensive formal studies of IGE materials were conducted in three clinical workshops in Columbia, South Carolina; Austin, Texas; and Columbia, Missouri, during the summer of 1972.[1] The focus of these studies was to determine how well the materials taught the IGE concepts and how well the materials were received by the teachers who used them. Weaknesses and content omissions also were identified and subsequently used for revising purposes. These three studies involved approximately 200 teachers who used 26 pieces of materials about the |I|D|E|A| Change Program. By distributing the task of evaluating various pieces of materials so that each teacher evaluated approximately one-fourth of the total package, a minimum of 57 sets of data were obtained on each piece within the set.

"|I|D|E|A| staff and consultants have reviewed materials extensively for their technical and conceptual adequacy."

Teachers in a Learning Community have the opportunity to help students find the learning activities that best suit their needs at a given moment.

Table 1 shows mean achievement scores for workshop teachers. The composite average achievement score obtained on the content tests covering each of the 26 IGE materials was 79%. The lowest mean score (71%) was achieved on the filmstrip "IGE Planning System" and the highest mean score (86%) resulted from the film "Many Roads." The mean scores on the remaining titles fell within this range.

[1] Jon S. Paden, *Individually Guided Education and Use of Materials: An Evaluation Report of the Effectiveness of IGE In-service Materials When Used in Summer In-Service Programs*, Dayton, Ohio, |I|D|E|A| (March 1973).

Table 2 shows how teachers responded to semantic differential questionnaires immediately after viewing each of the five IGE films. The responses indicate that the workshop participants felt that the films were refreshing, interesting, clear, professionally done, meaningful, and of superior quality. The responses indicate that the films' treatment of the subject matter was considered balanced between general and specific.

Teachers used the seven printed documents and were asked to evaluate them at the end of the in-service program. Table 3 summarizes their responses on a five-point scale from poor to excellent. The means range from 4.1 to 4.4, indicating a positive reaction to each of the printed materials.

The responses of the workshop participants to the 15 IGE filmstrips were uniformly positive. Table 4 shows the combined mean response and the range of the mean responses to the semantic differential questionnaire items administered for each piece of material. For example, on the inferior-superior scale the mean responses ranged from 4.0 for one filmstrip ("IGE Implementation") to 4.6 for another ("The IGE Learning Program"). The combined mean for the 15 filmstrips on this scale was 4.1.

The filmstrips were judged to be superior, sufficient, authentic, vigorous and to be neither simple nor complex.

Paden reported two conclusions from the evaluation study:

- Teachers can learn the basic concepts of the IGE program from the films, filmstrips, and print materials if the in-service materials are structured into the in-service program and if their use is emphasized by the workshop leaders.
- When used under these conditions, teachers will feel that the materials are stimulating, appropriate, and helpful.

He said two facts emerged from the 1972 materials evaluation study:

- First, teachers are enthusiastic about both the IGE concept and the teacher training materials being used.
- Second, although some content area items needed revision, basically the materials presented are clear, stimulating, and thorough.

Clinical Workshops

The IGE clinical training program has been assessed throughout its development by questionnaires and interviews. A questionnaire is completed by each participant at the conclusion of each session to assess the makeup of the training program itself and the extent to which each person has accomplished his professional goals. In addition, interviews are conducted by trainers to assess whether participants have met performance criteria. Data from these questionnaires and interviews have been overwhelmingly positive.

TABLE 1

Product Title	Media Type	N	Mean Score %
One At a Time Together	Film	59	77
Tuesday: Part I	Film	70	85
Tuesday: Part II	Film	68	75
Unit Meeting	Film	69	83
Many Roads	Film	67	86
IGE Learning Program	Strip	60	84
Organized for Learning	Strip	57	80
IGE Learning Modes	Strip	85	81
Performance Testing & Observation	Strip	61	79
IGE Planning System	Strip	75	71
Building IGE Learning Program	Strip	61	78
A Reach For Tomorrow	Strip	74	72
IGE League	Strip	57	82
Communicating with Parents	Strip	60	78
IGE Implementation	Strip	59	77
Managing IGE Learning Program I	Strip	61	83
Managing IGE Learning Program II	Strip	62	75
Managing IGE Learning Program III	Strip	64	83
What's It Like To Be In IGE	Strip	57	78
Implementation Guide	Print	73	83
Unit Operation & Roles	Print	74	82
The Learning Program	Print	75	84
Principal's Handbook	Print	75	79
Multi-age Grouping	Print	72	73
Learning Styles	Print	74	75
League Handbook	Print	67	81
AVERAGE FOR 26 TESTS			79

TABLE 2

	Mean Response(x)	
Boring	4.4	Interesting
Weary	4.1	Refreshing
Unclear	**4.2**	Clear
Amateur	4.5	Professional
Meaningless	4.4	Meaningful
Inferior	4.0	Superior
General	3.6	Specific

TABLE 3

Title	Mean Ratings (x) Poor	Ex'lent	N
The Implementation Guide	4.4		71
Unit Operations & Roles	**4.2**		72
IGE Learning Program	4.1		75
Principal's Handbook	4.3		69
IGE Multiage Grouping	4.1		70
Learning Styles	4.1		73
League Handbook	4.2		64

TABLE 4

	Mean Response (x)	
Inferior	4.1	Superior
Insufficient	4.1	Sufficient
Contrived	4.2	Authentic
Feeble	4.3	Vigorous
Complex	3.0	Simple

CHAPTER IV. MONITORING IGE IMPLEMENTATION IS CENTRAL TO PROGRAM DEVELOPMENT

Throughout its developmental period, the Institute has been concerned with monitoring the extent to which schools have implemented the processes of Individually Guided Education. These monitoring efforts have had three purposes:

- To provide data to |I|D|E|A| staff regarding the effectiveness of various tactics and strategies in facilitating progress toward Individually Guided Education.
- To provide feedback to IGE facilitators and school staff members as a basis for their improvement programs.
- To provide researchers with a measure of IGE development in evaluating the effects of the program.

As noted earlier, efforts to assess the effects of IGE are relatively futile without a measure of the extent to which IGE processes are actually being applied in schools.

Monitoring instruments were adjusted throughout the development period as the IGE concepts were continually refined. A second task has been the validation of the instruments to determine the degree to which they were measuring what they were supposed to measure.

Schools electing to participate in the |I|D|E|A| Change Program monitor their own progress. This monitoring is done by having teachers respond to a "baseline" questionnaire prior to IGE implementation and to an "outcomes achievement" questionnaire several months following initial implementation efforts in their school. Initially, the instruments were administered in IGE schools twice a year—in November and again in May. Subsequently, we realized that little time was available following the spring monitoring to utilize feedback data; therefore, formal implementation monitoring is now scheduled only in November.

During the early years of the program, participating schools had access to limited materials. In addition, early participants in the program were involved in a highly developmental phase as the training program and materials were refined.

Through site visits to schools, it became apparent to |I|D|E|A| staff that there was a gap between our assessment of IGE implementation and what teachers themselves were reporting. In part, this resulted from teachers in schools assessing their instructional and self-improvement processes in relation to what they had been doing previously or in relation to what they knew was going on in other schools. |I|D|E|A| staff members, on the other hand, were rating IGE implementation in terms of the desired ends and tended to rate schools lower.

As a result, a series of observations by teams of |I|D|E|A| staff members was carried out in 29 different Learning Communities and 21 IGE schools in November 1972. This monitoring effort yielded data for comparing perceptions of IGE staff members, facilitators, principals, Learning Community leaders, and teachers about the degree to which the 35 outcomes had been achieved.

The initial monitoring was done by pairs of |I|D|E|A| staff members to determine the degree to which |I|D|E|A| staff perceptions were equivalent. The second phase of the study was carried out by individual staff members monitoring additional schools.

When possible, |I|D|E|A| staff were joined by the Intermediate Agency Facilitator, the school principal, and the Learning Community Leader. Each observer completed an IGE Outcomes Questionnaire, assessing the operations of the specific Learning Community. This phase of the reliability study made it possible to compare |I|D|E|A| staff perceptions with those of other monitoring personnel. Findings reported in an |I|D|E|A| staff memorandum by Jon S. Paden[1] follow:

1. There is a positive correlation (R=.731) between the perceptions of |I|D|E|A| staff members assessing the degree to which Learning Communities have achieved the 35 outcomes of the program.
2. There is a positive correlation (R=.622) between the perceptions of |I|D|E|A| staff and Facilitators.

[1] |I|D|E|A| Staff Memorandum, *A Reliability Study Conducted During the Fall of 1972*, Dayton, Ohio (February 26, 1973).

3. There is no significant relationship between the perceptions of |I|D|E|A| staff and Learning Community Leaders assessing the degree to which the IGE outcomes have been achieved in those school visited.
4. There is significant agreement (R=.673) between the perceptions of principals and Learning Community Leaders within the monitored school.
5. There is not significant agreement (R=.065) between the perception of principals and |I|D|E|A| staff judging the degree to which schools have implemented the 35 outcomes.
6. While the differences are not predictable, Learning Community Leaders rated their schools an average of 21% higher than did |I|D|E|A| staff members monitoring the school.

A second intercoder reliability study of monitoring instruments was begun in the fall of 1973.

One of the first monitoring analyses reported[2] dealt with responses from groups of teachers who represented IGE schools at three stages of implementation: Teachers just beginning the IGE program, teachers who had been participating in the IGE program for three months, and teachers from the same school at the end of the first year of implementation.

Here are the study's conclusions:

1. Teachers in first-year IGE schools feel that their principals are using instructional and self-improvement processes to a greater degree than do teachers before they participate in Individually Guided Education.
2. Teachers in first-year IGE schools feel that Learning Community Leaders install instructional and self-improvement processes to a greater degree than do teachers before they participate in Individually Guided Education.
3. Teachers in first-year IGE schools feel that they use instructional and self-improvement processes to a greater degree than do teachers before they participate in Individually Guided Education.
4. Though teachers in first-year IGE schools feel that the instructional and self-improvement processes are used to a greater degree than do teachers who have not yet participated in the program, the IGE outcomes are only *partially* implemented during the first year.

A second analysis of teacher responses to outcome questionnaires was completed in June 1973.[3] This analysis includes data from a group of teachers in schools that began implementing IGE in September 1971, and a group in schools that began implementing IGE in September 1972. Data used in the analysis were collected during November 1972.

The 1971 teachers responded to the questionnaire after having been in the |I|D|E|A| Change Program for IGE for 15 months. The 1972 teachers responded during their third month of implementation.

Paden reported that teachers' perceptions of the degree to which 35 outcomes had been implemented were very similar, regardless of whether they had been involved with IGE for 3 months or 15 months. Paden offers the following explanations and interpretations for the similarity:

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[2] Jon S. Paden, *|I|D|E|A| Technical Report*, Dayton, Ohio (September 1972), p.60.

[3] Jon S. Paden, |I|D|E|A| Staff Memorandum, *Teacher Responses to Outcome Questionnaires: Schools Implementing in 1971 Compared with Schools Implementing in 1972*, Dayton, Ohio (June 21, 1973).

"Schools electing to participate in the |I|D|E|A| Change Program monitor their own progress."

Every student is a unique person with special interests and talents that deserve individualized attention from the education system.

1. The implementation strategies used during the fall of 1972 were sufficiently improved over those used prior to that time to allow the 1972 teachers to move into the program more quickly than was possible using the strategies employed with the 1971 teachers.
2. As IGE teachers are involved with the Change Program and become more knowledgeable of the 35 outcomes, they may have a tendency to judge themselves more critically. This phenomenon would yield an apparent lack of progress.
3. The questionnaire may not be sensitive to the kinds of changes that occur in IGE schools between the third and fifteenth months of implementation.
4. The implementation strategies utilized with schools after the third months of implementation may not be effective in terms of bringing about sustained continuous change, i.e., there is a large initial change but very small long-range change.

In general, current instruments distinguish between situations where IGE processes are in operation and where they are not in operation. The IGE processes may be installed with varying degrees of quality and teacher commitment. These characteristics and their effects on implementation have only been analyzed subjectively by |I|D|E|A| staff based upon their observations in schools implementing IGE.

CHAPTER V. EVALUATIONS SHOW THE EFFECTS OF IGE

How does the IGE Change Program affect students and schools? In addition to our own evaluation studies, IIDEA has commissioned three external evaluators to appraise selected aspects of IGE. Belden Associates, a marketing research firm, was asked to conduct a national survey of parents, students, teachers, and administrators to learn how they assess the value and effectiveness of IGE. A team from the University of Nebraska was asked to design a method for analyzing costs associated with the Change Program and to evaluate attitude changes of pupils and how teachers regard the organizational climate in IGE. The University of Missouri's Center for Educational Improvement was asked to do a case study of IGE implementation in a single school.

National Evaluation Study of Attitudes toward IGE

The most comprehensive analysis of perception of the value and effectiveness of the IGE program is a continuing study by Belden Associates of Dallas, Texas. Belden's first-year report was based on a representative sample of administrators, teachers, students, and parents in 73 schools where IGE was in operation during the 1972-73 school year.[1]

Overall Ratings of IGE

To summarize opinion toward IGE uniformly, a rating scale of "excellent, good, fair, or poor" was used among the three adult groups. Although IGE was rated favorably by all three groups, administrators were the most favorable and parents the least favorable. These responses are shown below:

IGE is:	*Adminis.*	*Teachers*	*Parents*
Excellent	68%	42%	34%
Good	28	53	42
Fair	1	3	8
Poor	—	1	4
Don't know, or no ans.	3	1	12
Total	100%	100%	100%

Administrators and teachers in higher-IGE schools were more favorable toward the program than were those in lower-IGE schools. Parent groups analyzed were uniform in their favorable attitudes toward IGE.

Children also were favorable in their opinions of IGE. Attitudes of children were obtained by asking if they had learned more, less, or about the same amount in school this year as compared to last year.

The table below shows the children's opinions, excluding the "don't know" answers and the children who were not in school before the 1972-73 school year:

		Years in IGE:	
	Total	*One Year*	*Two or More Yrs.*
Learned more this year than last year	75%	75%	77%
Learned same amount	20	21	19
Learned less	5	4	4
Total	100%	100%	100%

In volunteering their ideas about what they like most about school this year and what they liked most "last year," the children seem to like almost *everything* better this year.

Negative Aspects of IGE

While the overall opinion of IGE was very favorable, a few negative factors about the system were noted.

Among both administrators and teachers, the primary reason for dislike was the amount of time required for implementation. This factor was mentioned by 27% of the administrators and 36% of the teachers.

Along the same line, 12% of the administrators claim they are understaffed for IGE, and 15% of the teachers make the same observation. Sixteen percent of the teachers report a problem in meeting the needs of the children.

[1] *Individually Guided Education Program: National Evaluation Study, 1972-1973,* Belden Associates, Dallas, Texas.

No other negative factor was mentioned by more than 9% of the respondents in either group. Approximately 9% of the parents felt that their IGE school was not as good as other schools.

The children were not asked specifically about what they disliked about IGE. Instead, they were asked, compared to last year, to choose whether they feel that they have enjoyed school more, less, or about the same as last year. Among those who have been in school more than one year and have an opinion:

55% say they have enjoyed school more this year.
34% say about the same as last year.
11% say less now.

Teacher Evaluation of IGE Benefits

A majority of the teachers feel that the IGE program has been beneficial to them as teachers:

75% say the IGE system has allowed them to do a better job of teaching.
67% say that the other teachers in their unit are more effective now than they were before IGE.

Teachers in higher-IGE schools are more likely than average to feel the IGE system has been of benefit to them and to their colleagues, but even among those in lower-IGE schools strong majorities report improved performances.

Effects of IGE on Children

Teachers, parents, and children express their opinions of IGE's effects on children in numerous ways, but the outcome is very positive, in favor of IGE.

Among teachers:

60% think that *academic performance* is better under IGE than previous systems.
77% think that students are *enjoying school* more under IGE.
31% feel that *behavior* has improved under IGE; 16% say behavior is worse.
74% think that IGE works *equally well* for *fast* and for *slow* learners.
75% feel that IGE works *equally well* for *culturally advantaged* and *culturally different* children.

Among parents:

43% feel their child *learned* more this year than last year. Five percent feel their child has learned less.
40% say their child has *enjoyed school* more this year than last year. Six percent say their child has enjoyed school less.
26% feel their child *likes the teachers* more this year than last year. Six percent say their child likes the teachers less this year.

Overall, 59% of the parents are *very satisfied* with their child's progress in school this year.

"Seventy-five percent of the teachers say the IGE system has allowed them to do a better job of teaching."

IGE means that every child can go as far as his reach extends . . . and then beyond.

About six out of every ten parents who are familiar with the teaching methods used in their child's school prior to adoption of IGE feel that the teaching methods are *better* now than they were before IGE.

Among children:

58% think that school subjects are *more interesting* now than they were last year.
35% like their teachers more than last year.
34% like the other kids more than last year.

In evaluating the attitudes of parents and children about conditions "this year" compared to "last year," it should be kept in mind that about two out of every ten children interviewed were not in school "last year." Eliminating the first-year students (and their parents) from the tabulations increased the proportions who gave favorable responses. It also tended to eliminate most of the apparent differences in opinion between first-year and second-year IGE parents and students.

Cost Studies

As indicated in the Introduction, consideration has been given to the economics of the |I|D|E|A| Change Program for Individually Guided Education. |I|D|E|A|'s interest has been in providing information on relationships between probable costs of IGE and a school's current program costs and educational benefits.

It is obvious that answers to cost questions relating to IGE will differ from school to school. Beyond an initial outlay for training materials, the cost of implementing the program depends largely on the investment a school wishes to make. In-service training for the Change Program in some schools may simply be a matter of re-allocating currently budgeted funds for annual in-service. Where state departments of education or central staffs of large school districts serve as the Intermediate Agency, in-service costs are part of their basic operating budgets. Regional educational service centers of various types include the in-service program within their school district membership fee and/or through special grants for educational personnel development. In addition to state or federally funded in-service programs, some colleges and universities have established special fees or tuition for IGE-related workshops and give university credit.

With regard to staffing pattern changes, some schools draw more heavily on volunteers than upon paid clerical and instructional aides. Some schools pay supplements to Learning Community leaders while others do not. In terms of instructional materials, some schools elect to adapt existing curricular materials to IGE. In other schools, curriculum committees have sought out new programs to purchase with normal or additional allocations.

Also, school facilities need not be a barrier to IGE. The program is in operation in both "egg-crate" and "open-plan" schools. Some school buildings housing IGE programs were constructed around the turn of the century.

A Cost Analysis Model

To say that cost will vary from school to school or that it depends upon what a school wishes to do is not adequate, however. People want to know what the cost experience has been. What have schools actually elected to do?

The primary purpose of a study by a team of researchers at the University of Nebraska[2] was to develop a cost analysis model which schools could use to identify various cost factors directly associated with implementation and continuation of the |I|D|E|A| Change Program. A secondary purpose of the study was to estimate expenditure changes due to the IGE program in the schools participating in the study. These schools were not representative of all IGE schools, however, and information from this portion of the study is not reported in this summary.

The design of the research was developmental and field-based in nature. The study was a pilot attempt in the development of a cost analysis model based on a structure which would provide answers to the following questions:

1. Have there been any additional implementation costs associated with IGE because of the type of school, i.e., urban, urban inner-city, or suburban?
2. Have there been any exceptional start-up or continuous costs associated with IGE?
3. How much money has been expended for in-service training over and above that which is normally spent?
4. Do IGE materials cost more for in-service programs than funds normally expended for in-service materials?
5. Has there been an additional expenditure for the utilization of outside consultants because of IGE?
6. Have there been additional costs because of the employment of aides and/or new staff?
7. Has the cost for substitute teachers been changed because of the IGE program?
8. What have been the expenses related to released time for professional staff planning?
9. How have the funds associated with special education courses been incorporated into IGE programs?
10. Have there been unexpected costs over and above normal costs because of differences in instructional materials and equipment?
11. Have bookkeeping costs gone up because of IGE?
12. Have there been increased pupil management and information systems costs associated with the implementation of IGE?
13. Have there been additional costs associated with public relations because of IGE?
14. Have there been any additional costs for building modifications as a result of the IGE program?
15. Are there any additional costs as a result of the type of league?
16. Have the IGE schools used outside or extra funds to assist with the implementation of IGE?

To ensure the applicability of the results of the study, a variety of types of schools presently operating the IGE program were requested to cooperate by supplying selected data. The cooperating schools were classified by League sponsorship and by the general nature of their enrollment, i.e., urban, urban inner-city, and suburban. The IGE schools selected for the study were from three different Leagues in a selected state in the Midwest.

A total of eight IGE schools were included in the study. One urban school and two urban inner-city schools from the Alpha league participated. One urban school and two suburban schools from the Beta league participated, and one urban school and one suburban school from the Gamma league took part. The five schools from the Beta and Gamma leagues were each members of different school districts.

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[2] G. R. Boardman and C. Cale Hudson, *Development of a Cost Analysis Model Which Schools May Use to Determine Budget Needs for Implementing Individually Guided Education*, Teachers College, University of Nebraska, Lincoln (August 1973).

The test instrument and data collection procedures consisted basically of a self-reporting instrument, personal interviews, and on-site visitations. The cost analysis model is available by writing to |I|D|E|A|.

Other Cost Data

Cost data also have been obtained from principal questionnaires and teacher questionnaires. The information below comes from 425 schools implementing IGE in 1971 and the fall of 1972.

Instructional Budg

Principals were asked to compare their instructional budgets for things such as books, supplies, and audiovisual materials with the budgets of the non-IGE schools in their districts. Of principals reporting in 1973, 64% indicated that they had no additonal budget; 17% indicated that their additional budget was no more than 5% higher than the non-IGE schools; 7% said no more than 10% higher; 2% indicated no more than 15% higher; and 7% indicated that their budgets were at least 15% higher than the non-IGE schools in their districts. (Percentages do not total 100% since some principals did not respond.)

Staffing Patterns

Teacher Allotments

Principals of schools implementing the program in 1973 were asked to compare their teacher allotments with the allotments of the non-IGE schools in their districts: 85% of these principals indicated that no special consideration was given their schools because they were implementing the IGE program; 9% of the schools indicated that they were receiving a 5% greater allotment because of IGE implementation; and 2% of the principals indicated that they were on a 20% greater allotment because they were implementing the program.

Teacher Aides

These same principals were asked to compare the number of paid teacher aides available to them versus the non-IGE schools. Of the principals, 50% were receiving no more aid:, 23% were allotted two additional aides; 13% were allotted no more than four additional aides; 8% were allotted no more than six additional aides; 1% were allotted no more than eight additional aides; 2% were allotted more than eight additional aides.

Relative to the teacher aide area, the teachers were asked how many man-hours per day aides were available to each of their Units. Over 2,000 of the teachers who implemented the program in 1971 responded to this question: 16% of them indicated they were getting aide-help less than 2 hours per day; 10% indicated they were getting between 2 and 4 hours per day; 26% of the teachers indicated 4 to 6 hours per day; 36% indicated between 6 and 8 hours per day; and 11% indicated more than 8 hours per day. In response to the same question asked of over 3,500 teachers implementing the program in the fall of 1972: 40% indicated they were using aides less than 2 hours a day; 18% indicated between 2 and 4 hours per day; 14% indicated between 4 and 6 hours per day; 19% indicated 6 and 8 hours a day; and 3% indicated they were using aides more than 8 hours per day in their Units.

Teacher Perceptions of School Climate

Another dimension of |I|D|E|A|'s evaluation program has focused on staff morale and staff attitudes about the organizational climate, tone, or "atmosphere" within IGE schools. The importance of assessing the impact of implementing IGE on teacher perceptions of how people in a school relate to one another—the psychological environment of the school—is heightened by the probability that the climate perceived by teachers is transmitted to the classroom and to the students in the building where the teachers work.

A study of the school climate was conducted by staff members of Teachers College, University of Nebraska.[3] The instrument used was the Organizational Climate Index (OCI), one of the most widely used tools for assessing teachers perceptions of organization climate. The survey was conducted in 545 schools that had completed the November 1972 IGE monitoring instruments.

With respect to limitations, the researchers noted that only six schools of the population were in their third year of IGE. In addition, these six schools had entered the program during its early phases of development and did not experience the same implementation strategy nor did they have the complete set of in-service materials during their first year that was available to the first and second year schools.

Conclusions of the Study

In discussing the findings and conclusions of their study, the researchers observed: It appears that as the IGE model is implemented within a school, there is a predictable "opening" of the climate and an increased fostering of intellectual and developmental activites within the building. For the schools which were involved in this study, however, the achievement of high implementation of the IGE processes resulted in the attainment of school climate, as perceived by teachers, which approximated national norms.

Acknowledging that their work had been an exploratory study of questions about the relationship

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[3] Edgar A. Kelly, Fred H. Wood, and Ronald Joekel, *Teacher Perceptions of School Climate and the Implementation of Individually Guided Education (IGE)*, Teachers College, University of Nebraska, Lincoln (August 1973).

between teachers' perceptions of building climate and the utilization of [illegible] processes, the investigators reported the "findings and conclusions of this study suggest that positive results are obtained by the implementation of the IGE model—if an increase in climate which stresses intellectual endeavors, achievements, respect for others, and increased interpersonal interactions is an intended outcome."

They further noted, "The preliminary results (of this study) suggest that the implementation of the IGE model does, in the eyes of teachers, lead toward the types of outcomes which are stressed by the model. And that, after all, remains the best test of program accountability—the ability to deliver on promises which are made or implied."

A Case Study Conducted by the Center for Educational Improvement

A case study [4] of IGE implementation at the John Ridgeway Public School, Columbia, Missouri, was conducted by the Center for Educational Improvement, College of Education, University of Missouri at Columbia. The project staff began collecting data when the idea of participating in the IGE program first emerged at the school to the end of one full year of implementation.

Conclusions reported by the investigators follow:

- IGE implementation is possible in an old building.
- *IGE need not cost more than traditional programs.*
- The community was interested in the IGE concept.
- A large majority of the Ridgeway parents were pleased with the program.
- A majority of the students liked the program better than a traditional program.
- Parents agreed with the basic concepts undergirding the IGE system.

|I|D|E|A|'s Study of Pupil Outcomes

The informal feedback relating to pupil outcomes obtained by |I|D|E|A| staff members during the past two years from facilitators, principals, and teachers has been positive. There have been no reports of schools experiencing achievement problems. The feedback is characterized in the following paraphrase: "The students are learning just as much and liking school a lot better; the kids are much more self-directed now; they are more responsible for their own learning now."

"The cost of implementing the program depends largely on the investment a school wishes to make."

Success in the IGE program depends on a willingness to learn and accept new ideas rather than on making large material purchases and building new facilities.

To obtain more detailed information relating to possible effects of the implementation phase of the program, standardized achievement test results were obtained from 19 schools in their second year of IGE implementation. [5]

The Iowa Test of Basic Skills was administered to third-, fourth-, fifth-, and sixth-grade students in those schools participating. The mean grade equivalent scores for each test group were calculated for the year prior to participating in IGE and for the two years following.

Paden reported that no significant changes occurred in these achievement areas. These findings for the initial two years of using IGE are not surprising. Improvement programs that deal with instructional processes are not expected to have the early impact on achievement that is typical of introducing and testing for new content in the schools.

A number of other studies relating to various aspects of IGE have been completed or undertaken by others. Those that have been reported to |I|D|E|A| by IGE facilitators are listed in the Appendix. Results of the study of pupil attitudes were not available at the time this interim report was prepared for printing.

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[4] *A Friend Needs a Friend: A Case Study of IGE Implementation at the John Ridgeway Public School, Columbia, Missouri*, Center for Educational Improvement, College of Education, University of Missouri, Columbia (October 1973).

[5] Jon S. Paden, |I|D|E|A| Staff Memorandum, *Study of the Possible Effect of the Early Stages of Implementing IGE upon Standardized Achievement Scores*, Dayton, Ohio (September 1973).

CHAPTER VI. SUMMARY

We prepared this report to provide you with answers to two basic questions: How are we evaluating the |I|D|E|A| Change Program for Individually Guided Education? What have we found out so far?

We have noted that this is an interim report. Evaluation of the program is not complete. Consistent with our commitment to make certain that each Foundation program is soundly developed and thoroughly tested, the collecting and analysis of information about the operation and effects of IGE will continue for some time into the future.

Evaluation results that are in, however, are positive. As noted in the introductory section of this report, the |I|D|E|A| Change Program for Individually Guided Education continues to be one of the most promising school improvement efforts ever undertaken.

EVIDENCE OF CHANGE is definite. IGE schools that are a year or two into the program differ markedly from their prior IGE status in terms of organization, use of staff resources, availability of various learning options for students, and leeway afforded students and teachers in selecting and pursuing learning goals. These changes are evidence of progress toward individualized learning, and some of the changes (nongraded schooling, for example) have been confirmed in other contexts as contributing to higher student achievement.

ATTITUDES TOWARD IGE are overwhelmingly favorable. Some data from the Belden Study indicate:

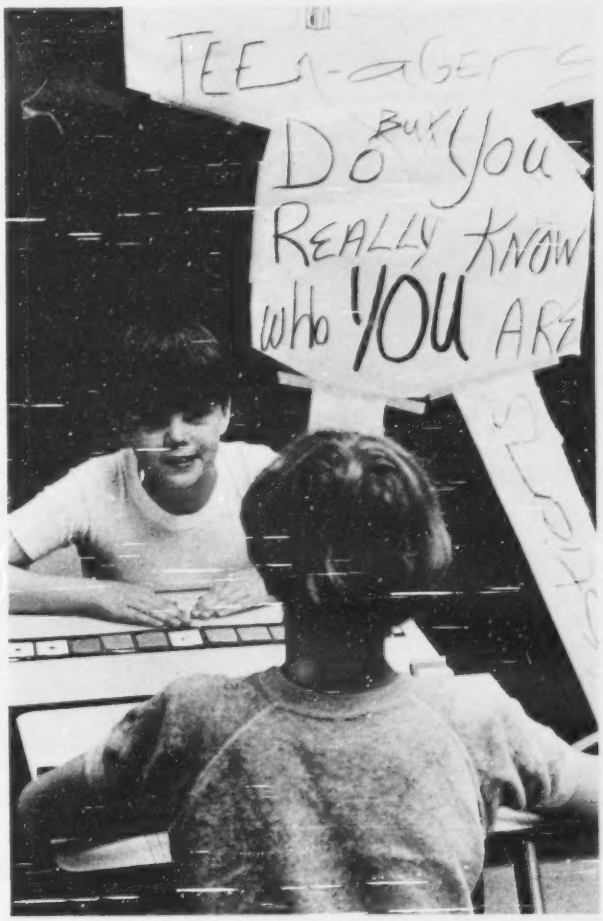
- 96% of the school principals interviewed said IGE was "excellent or good." None said it was "poor."
- 95% of the teachers said IGE was "excellent or good." One percent said "poor."
- 75% of the teachers said IGE allowed them to do a "better job of teaching." Four percent said it "kept them from doing a good job."
- 74% of the teachers said IGE works "equally well" for fast and slow learners. Sixteen percent said "better for fast" and 10%, "better for slow."
- Of parents interviewed, 61% said IGE teaching methods are better, 10% said they are worse; 51% said their child's school was better than other schools, 9% said "not as good"; 59% were "very satisfied" with their child's progress, 4% were "very dissatisfied"; 43% felt their children had learned more under IGE, while 5% felt they had learned less.
- Of the sample of students interviewed, 63% believed they learned more through IGE, 4% felt they had learned less; 58% found school subjects "more interesting this year," 5% said "less interesting"; 55% reported enjoying school more, 11% reported enjoying it less; and 35% said they liked their teachers more after IGE, while 9% said they liked them less.

IGE'S IMPACT ON STUDENT ACHIEVEMENT TEST SCORES thus far has been mixed. |I|D|E|A|'s own evaluation, based on comparisons of student scores on standardized achievement tests after two years in IGE, indicates no major differences, yet. These findings are consistent with our expectations in light of other research on programs that deal with instructional processes rather than program content and with the relatively short time of program development and operation.

Several studies by individual school districts and other institutions show significant improvement in math and reading achievement following adoption of IGE. No studies have been reported to the Institute which indicate a significant decrease in student achievement following IGE implementation.

IGE'S IMPACT ON COST also is mixed. Nearly two-thirds of the IGE school principals reporting in 1973 indicated their budgets were no different than other schools in their districts. In terms of personnel —characteristically heavy cost items—85% of the school principals reported they were given no special consideration on teacher allotments because of IGE.

"If teachers are expected to change, they must be given the freedom to elect that change."



The Change Program for IGE creates a healthy environment in which educators can cultivate promising educational concepts without reactionary censure.

Fifty percent of the principals reporting in 1973 said they were given no additonal teacher aides because they were an IGE school. Our data indicate that matters of cost are largely up to the individual school.

Again, results of evaluating IGE thus far are very encouraging. More definitive answers to questions about the program's impact will be forthcoming as our careful appraisal of the program continues.

Among the many lessons learned about educational improvement, buttressed by the Institute's continuing inquiry, one thing stands out above all the rest: If teachers are expected to change their methods of behaving to ones considered desirable for better instruction, they must be given the freedom to elect that change; attempts to impose change upon them may yield some short-term, superficial success, but will fail in the long run.

We have observed that teachers working in IGE schools are changing their accustomed ways of behaving. In a period of general despair over the prospects for continuing educational change, there are reasons for hope—and |I|D|E|A| is pleased to have the opportunity to work with classroom professionals who have chosen to work toward continuous improvement in learning opportunities for students.

APPENDIX
IGE RESEARCH STUDIES REPORTED BY FACILITATORS

November 1972

Dick Causey of Auburn University:

Investigator: Mr. Ed Richardson, doctoral student, Auburn University. Subject of study: Administrative leadership patterns comparing IGE schools with other selected schools. Completion date: October 1972.

Investigator: Dr. Dan Wright, Assistant Professor, Educational Media, Auburn University. Subject of study. To determine administrative understanding of the IGE model in the Alabama League of Cooperating Schools. Date of completion: June 1972.

Investigator: Jackie Diener, doctoral student, Auburn University. Subject of study: Home-school communication component of the IGE model in eleven selected Alabama Schools. Date of completion: August 1972.

Investigators: Melinda Killham, Nancy Washington, Charles Smith, Elbert Williams, and Charles Parker, graduate students at Auburn University. Subject of study: An opinion survey of selected students in Alabama Schools employing Indivually Guided Education Programs. Completion date: May 1972.

David Ashby of Dayton Public Schools:

Investigator: Curriculum Department. Subject of study: IGE middle schools teacher and student evaluation. Completion date: June 1972.

Investigator: Bedford Boston, doctoral student, Bowling Green State University. Subject of study: Correlation between self-actualization and the ability to work successfully within the IGE. Completion date: June 1973.

Investigator: Leila Sussman of Syracuse University Research Corp. Subject of study: Social organization of Innovative Schools. Completion date: Fall 1973.

Joe Hansen of Education Service Center, Region XIII:

Investigators: Joe Hansen and Donroy Hafner, Coordinator of Evaluation, Director, Instructional Services Division. Subject of study: To obtain data on effective functioning of Region XIII IGE League and to answer specific questions regarding improved achievement, pupil attitudes, teacher decision making, pupil self-direction and parental involvement. Completion date: June 1973.

Oliver Pamplin, Albermarle County, Charlottesville, Va:

Investigator: Edward Warehime of Lynchburg City Schools. Subject of study: Schools are IGE affiliated. Date of completion: Spring 1974

Leonard Ojala of Educational Research and Development Council of N.E. Minnesota:

Investigator: Steve Kleisath, Southwest State College. Subject of study: Evaluate Title III, ESEA IGE project. Date of completion: June 1972-3-4.

Sandra Negley of Niles Community Schools':

Investigator: Jerri Bishop of University of Dayton. Subject of study: Implementation of IGE in various schools—which methods used, rate of implementation, degree of IGE in the system, how much teacher and community input.

David Killian of Miami University:

Investigator: Clarence Wright of Auburn University. Subject of study: To analyze the extent to which selected IGE elementary schools have individualized their programs of instruction. Date of completion: 1972.

Edwin Warehime of Lynchburg Public Schools:

Investigator: Lynchburg Public Schools, Project PLACE ESEA Title III. Subject of study: Evaluation of Project PLACE Schools and IGE.

Floyd Edwards of East Tennessee State University:

Investigator: Floyd Edwards, Assistant Professor at East Tennessee State. Subject of study: To determine the effects, if any, of the IGE multiunit concept on teacher attitudes toward education and student attitudes toward school, toward learning, toward peers and self-concept. Completion date: November 1972.

George Hohl of Iowa State University:

Investigator: George Hohl, graduate student at Iowa State. Subject of study: Student achievement in reading and math; attitudes toward basic IGE concepts as exhibited by students, parents, teachers, student teachers; changing role of the elementary principal; the self-concept of students; the quality of the school based upon the four characteristics of internal school behaviors that are judged to be basic to quality: individualization, interpersonal regard, creativity, and group activity (Indicators of Quality); teacher's knowledge of the facts and principles of child growth and development; per pupil costs. Date of completion: December 1973.

Thomas Gibney of the University of Toledo:

Investigator: Gerald Martau, doctoral student. Subject of study: The development of a model mathematics methods component of an elementary school teacher's preparation. Completion date: December 1972.

Dr. Henrietta Grooms of Region VII Education Service Center:

Investigator: Dr. Henrietta Grooms, IGE Facilitator, of Region VII Education Service Center. Subject of Study: Evaluation of IGE Implementation based on stated objectives of Service Center. These objectives were derived from IGE Outcomes and will be determined through observation and administration of an Outcomes Questionnaire. Completion date: May 1973.

Frank Nauyokas, IGE Project Director of Southwest Minnesota State College:

Investigators: Steve Kleisath and Richard Smith of the Psychology Department at Southwest. Subject of Study: To build an evaluation procedure based on the objectives of each individual school by which they can evaluate the effectiveness of their program. Date of completion: Early spring, 1973.

Leslie Bernal, Associate Director of Merrimack Education Center:

Investigator: Leslie C. Bernal, doctoral study. Subject of study: System Output Analysis of (2) Experimental (IGE) Schools and (2) control schools. Completion date: March 1973.

Investigator: Dr. John Vaughn, League Evaluation. Subject of study: IGE League Operation: An Evaluation of year one implementation activities. Completion date: June 1972.

January 1973

Norvel Burkett of Mississippi Educational Services Center:

Investigator: Mrs. Irene Mayfield, Principal of McLeod Elementary School in Jackson. Subject of study: Comparing achievement and self-concept of children in two traditional self-contained schools with children in two IGE schools—achievement in math. Regular instruction vs. IMS (Individualized Math). Date of completion: May 1973.

Barbara Thompson, Ph.D. Consultant, Innovations and Program Development, State of Wisconsin/ Department of Public Instruction:

Investigator: Tom Loveall, Principal of McKinley School in Appleton and MUS/E Committee Chairman. Subject of study: Three year evaluation of the achievement of children. Teacher evaluation of program; student evaluation of program. Completion date: June 1975.

Investigator: David McKenzie, Counselor of Psychology of Sparta School System. Subject of study: Assessment of change in student, parent, and teacher attitude; assessment of student achievement in traditional vs. IGE schools in terms of stated objectives. Date of completion: Longitudinal—started in 1972.

Investigator: Terrance Sheridan, Department of Educational Administration at the University of Wisconsin. Subject of study: Identify expectations held for the unit leader role by principals, unit teachers and unit leaders. Examine relationships that exist between agreement on expectations held for the unit leader role and ratings of unit leader performance effectiveness. Completion date: August 1973.

Kenneth Smith, University of Wisconsin:

Investigator: Kenneth Smith, doctoral student. Subject of study: An analysis of the relationship between effectiveness of the multiunit elementary school's instructional improvement committee and interpersonal and leader behaviors.

Richard G. Nelson, University of Wisconsin:

Investigator: Richard Nelson, doctoral student. Subject of study: An analysis of the relationship of the multiunit school organization structure and individually guided education to the learning climate of pupils.

Mary Quilling, University of Wisconsin:

Investigator: Mary Quilling, Wisconsin Research and Development Center for Cognitive Learning. Subject of study: IGE—MU School Report.

Roland Pellegrin, University of Wisconsin:

Investigator: Roland Pellegrin, Wisconsin Research and Development Center for Cognitive learning. Subject of study: Some organizational characteristics of multiunit schools.

Mildred Anderson, University of Wisconsin:

Investigator: Mildred Anderson, doctoral student. Subject of study: The behavioral role of professionals in selected curricular areas in five types of elementary school organizational structures.

H. Scott Herrick, University of Wisconsin:

Investigator: H. Scott Herrick, doctoral student. Subject of study: The relationship of organizational structure to teacher motivation in traditional and multiunit elementary schools.

James Walter, University of Wisconsin:

Investigator: James Walter, doctoral student. Subject of study: The relationship of organizational structure to adaptiveness in elementary schools.

John Benka, University of Wisconsin, doctoral student:

Investigator: John Benka. Subject of study: The perception of the director of instruction as an agent of organizational change.

Caroline Loose, doctoral student, University of Wisconsin:

Investigator: Caroline Loose.. Subject: Decision-making patterns and roles in the IIC.

August 1973

Edwin Warehime, Project Coordinator of Project PLACE, ESEA Title Iii:

Investigator: Edwin Warehim of Lynchburg Public Schools. Subject of study: Second year data on Project PLACE, Personalized Learning Activity Centers for Education, ESEA Title III. Date of completion: July 1973.

George Glasrud, Educational Consultant, Wisconsin Department of Public Instruction:

Investigators: Patricia Andress, Juanita Sorenson, Max Poole and LLoyd Joyal. Subject of study: Selected trade books and tasks keyed to the Wisconsin Design for Reading Skill Development Word Attack, Level A.

Investigators: Marie Bentz and Juanita Sorenson. Subject of study: An assessment instrument to determine readiness to enter a primary unit in a multiunit elementary school: reading, language arts area.

Investigators: Emma J. Boehmke and Lloyd Joyal. Subject of study: Selection of attitudinal statements regarding behavior of teachers in Individually Guided Education schools in the State of Wisconsin.

Investigators: Eva Christie, Juanita Sorenson, Max Poole, and Lloyd Joyal. Study: Transition from group to individualized instruction in mathematics.

Investigators: Jim Gilbertson and Lloyd Joyal. Subject of study: Individualized education in elementary mathematics.

Investigators: Esther Hanson and Ronald Mortaloni. Subject of study: Using contracts in teaching.

Investigators: Marlene Hanson and Juanita Sorenson. Subject of study: A comparison between the theoretical role and practical role of the principal in the IGE/MUS-E School.

Investigators: David Hermundson and Lloyd Joyal. Subject of study: A program to individualize computational skills in mathematics for grades 4-6 using the objectives in the Wisconsin K-6 guidelines to mathematics.

Investigators: Elizabeth Mathson and Juanita Sorenson. Purpose of study: An assessment instrument to determine readiness to enter a primary unit in a multiunit elementary school: mathematics and psychomotor areas.

Investigators: Larry Meyer and Lloyd Joyal. Subject of study: Teacher attitudes toward affective aspects of IGE.

Investigators: Roxanna Olsen, Lloyd Joyal, Max Poole, and Juanita Sorenson. Purpose of study: An alternative to reading seatwork in the primary grades.

Investigators: William Premeau and Max Poole. Study: The development and testing of an individualized reading program.

Investigators: Rose Vruno, Lloyd Joyal, Max Poole, Juanita Sorenson. Subject of study: A design for the individualization of reading.

Investigator: Lloyd Joyal. Subject of study: A comparison of the types of learning patterns of students in a self-contained and a multiunit school.

Leslie C. Bernal, Boston University, School of Education:

Investigator: Leslie Bernal. Subject of study: To measure the effects of IGE/MUS-E organizational model on the outputs of the elementary school program. Date completed: 1972 school year.

Donn Gresso, Supervisor of Training Programs for Center of Educational Improvement at the University of Missouri:

Investigator: Donn Gresso. Subject of study: Evaluation of IGE schools who scored at specific level on attainment of outcomes with non-IGE schools in the same district using OCDQ and assumptions about learning and knowledge questionnaire. Several different schools in different states. This has been submitted as an NIE grant study. Date of completion: April 1974.

Marie Cardamone and Jack Owen, Evaluation Dept. of Des Moines Public Schools:

Investigators: Marie Cardamone and Jack Owens. Subject of study: To set guidelines for implementtation of IGE. Date of completion: June 1974.

David Ashby of Dayton Public Schools:

Investigator: Leila Sussman of Syracuse Research Corp. Subject of study: Social organization of innovative schools.

Dr. Floyd Edwards, Assistant Professor at East Tenessee State University:

Investigator: Floyd Edwards. Purpose of study: To determine the effects, if any, of the implementation of the IGE multiunit concept on teacher's attitudes toward education and student attitudes toward school, learning, peers, and self-concept. Date completed: November 1972.

Frank Nauyokas, IGE Project Director of Southwest Minnesota State College:

Investigator: Steven Kleisath, IGE Project Evaluator—Individualizing and Humanizing School Programs. Subject of study: To ascertain if the IGE Project is meeting its objectives. Conducted during school year 1972-73.

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